From: Nesci, Kimberly [Nesci.Kimberly@epa.gov]

**Sent**: 1/7/2021 4:20:40 PM

To: Saenz, Diana [Saenz.Diana@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Goodis, Michael

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Calvo, Estrella [calvo.estrella@epa.gov]; Kuefler, Patrick [kuefler.patrick@epa.gov]; Arrazola, Ignacio

[arrazola.ignacio@epa.gov]; Hayes, Sharon [Hayes.Sharon@epa.gov]

**Subject**: RE: OCSPP/OECA planning call re: Clarke

Attachments: PFAS\_Rinsate Summary\_Preliminary\_01072021.xlsx

Per the call happening right now, please see bullets below originally developed for Alex for her conversations with OECA. Also, please see attached for a file that includes the data from ACB on the PFAS found in containers. Note that this file does not include the Anvil data, as it is intended to support the conversations with Inhance (Diana, this is the information Alex asked us to share).

- OPP's Analytical Chemistry Lab (ACB) has been testing Clarke product (Anvil 10+10), and both fluorinated and un-fluorinated High Density Polyethylene (HDPE) containers for the presence of PFAS compounds.
- ACB is also in the process of developing a method for quantitative detection of PFAS in oily substances
- With regards to containers, ACB rinses containers with a solvent to determine the presence of PFAS. ACB has found the following:
  - o Fluorinated containers provided by Clarke do contain PFAS
  - Unfluorinated containers provided by Clarke showed trace amounts of PFAS (near the limit of detection for the equipment used); ACB is investigating this, and it may be cross-contamination rather than the unfluorinated containers themselves, based on the small levels and the nature of the PFAS compounds.
- With regards to Anvil 10+10, ACB has found the following:
  - Clarke sample from the production line is cleaner (in terms of PFAS) than those that have been stored in containers (30-gallon drum and 2.5-gallon jug)
  - Sample of Clarke product directly from production line shows trace level of some PFAS and could be attributed to cross contamination
  - $\circ$  Samples of Clarke product stored in fluorinated containers (30-gallon drum and 2.5 gallon jug) show higher levels of PFAS (3-4x higher than production sample). However, the number of PFAS compounds found in the samples and their respective levels are  $\sim$ 100 fold less than that found in rinsates.
- Based on this, ACB hypothesizes that PFAS may be formed in the process of fluorinating High Density
  Polyethylene (HDPE) containers then leach into the Anvil 10+10 product. There is a plausible chemical pathway
  for this to occur. At this point, ACB does not have enough data to determine the leaching rate of PFAS from
  containers onto the products.
- OPP Is aware that many companies use fluorinated HDPE containers to store and distribute pesticide products. OPP is working closely with OPPT and OECA. OECA is seeking additional information from the company Clarke uses to fluorinate their containers: Inhance Technologies.
- It is unclear at this point:
  - whether this may be happening to other products, pesticide products and otherwise.
  - whether this is specifically as a result of the process that Inhance uses or can happen with any HDPE fluorination process.

Please let me and Thuy Nguyen know if you have any questions. Thank you!

Kimberly

Kimberly Nesci, Director Biological and Economic Analysis Division (BEAD) Office of Pesticide Programs Office of Chemical Safety and Pollution Prevention 703-969-9109 (cell)

-----Original Appointment-----

From: Saenz, Diana <Saenz.Diana@epa.gov> Sent: Wednesday, January 6, 2021 11:05 AM

To: Saenz, Diana; Messina, Edward; Goodis, Michael; Keigwin, Richard; Nesci, Kimberly; Nguyen, Thuy; Qian, Yaorong;

Teter, Royan; Miles, James; Rodman, Sonja; McGuire, Karen; Aubee, Catherine; Harris, Michael

Cc: Dunn, Alexandra; Irving, John; Kelley, Rosemarie; Fitz, Nancy; Barmakian, Nancy; Calvo, Estrella; Kuefler, Patrick;

Arrazola, Ignacio; Hayes, Sharon

Subject: OCSPP/OECA planning call re: Clarke

When: Thursday, January 7, 2021 11:00 AM-11:30 AM (UTC-05:00) Eastern Time (US & Canada).

Where: Microsoft Teams Meeting

Planning call to coordinate our message and scope of discussion for the call with Clarke on Friday 1/08.

## Microsoft Teams meeting

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